



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/879,637	06/12/2001	Chang-Whan Jung	SAM-210	4260

7590 11/05/2002

Anthony P. Onello, Jr., Esq.
Mills & Onello LLP
Suite 605
Eleven Beacon Street
Boston, MA 02108

EXAMINER

NGUYEN, MINH T

ART UNIT

PAPER NUMBER

2816

DATE MAILED: 11/05/2002

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/879,637

Applicant(s)

JUNG ET AL.

Examiner

Minh Nguyen

Art Unit

2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

DETAILED ACTION

Specification

1. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

2. The abstract of the disclosure is objected to because: (i) it compares the invention with the prior art, (ii) it uses language which can be implied, i.e., "the fuse of the present invention".

Correction is required. See MPEP § 608.01(b).

Claim Objections

3. Claims 6, 9 and 12 are objected to because of the following informalities:

As per claim 6, the term “power supply voltage” should be changed to -- other power supply voltage -- to avoid antecedent basis problem since the term is already used on line 2 of claim 3. The term “input terminal” should be changed to clearly identify it is the input terminal of the first stage of the plurality of the transmission circuits.

As per claim 9, the term “the fuses” should be changed to -- each of the fuses--.

As per claim 12, the term “the transmission circuit” should be changed to --each of the transmission circuits --. The term “power supply voltage” should be changed to --another power supply voltage-- to avoid antecedent basis problem since the term is already used on line 4 of claim 8.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-12 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 5,517,151, issued to Kubota.

Art Unit: 2816

As per claim 1, Kubota discloses a fuse circuit (Fig. 6) for a semiconductor integrated circuit, comprising:

a plurality of fuses (there are four fuses); and

a plurality of transmission circuits (24-1, ..., 24-2) for transferring signals in response to a status of the fuses (depending on whether the fuses are blown or not).

As per claim 2, since the circuit blocks 21 are identical, each of the fuses in each of the circuit blocks has identical status.

As per claim 3, each of the fuses includes two ends are shown in Fig. 6, and the lower end of each of the fuses in Fig. 6 is connected to a power supply voltage.

As per claim 4, Kubota further discloses each of the transmission circuits 24-1, ..., 24-4 correspondent to each of the fuses (each fuse connects to each transmission gate), wherein each of the transmission circuits comprising:

a transmission gate (24-1) having an input terminal (the terminal connects to node B), an output terminal (the terminal connects to drain of transistor 26-1), and a primary control terminal (the terminal connects to the gate of transistor 26-1 and the other end of the corresponding fuse) connected to the other end of a corresponding fuse, and a secondary control terminal (the terminal connects to the output of the corresponding inverter); and

an inverter (the inverter connects to the other end of the corresponding fuse) having an input terminal connected to the other end of the fuse and the primary control terminal, and an output terminal connected to the secondary control terminal (as shown).

As per claim 5, Kubota further discloses each of the transmission circuits 24-1, ..., 24-4 includes a first conductive transistor (the half left of the transmission gate 24-1 is an NMOS type

Art Unit: 2816

transistor) and a second conductive transistor (the half right of the transmission gate 24-1 is a PMOS type transistor), and these transistors are connected as recited.

As per claim 6, Kubota further discloses that a power supply voltage at node 8 is applied to the input terminal of the first transmission circuit 24-1 through the transistor connected diode 11' as shown.

As per claim 7, the recited resistor in each of the transmission circuits reads on the resistor which is connected to the other end of the corresponding fuse as shown in Fig. 6, and the resistor is connected as recited.

As per claim 8, Kubota discloses a fuse circuit storing information related to a semiconductor integrated circuit (Fig. 6), comprising:

a plurality of fuses (there are four fuses), each has two ends and one end (the lower end) is connected to a power supply voltage, the fuses storing predetermined information relevant to the semiconductor integrated circuit (determined by whether the fuse is blown or not); and

a plurality of transmission circuits (there are four, each block circuit 21 except the fuse, is seen as a transmission circuit) connected to the fuses as recited for transferring an input signal to an output terminal (when the transmission circuit is closed),

wherein the transmission circuits are connected in series (the output terminal of transmission circuit in the first block 21 is connected to the input terminal of transmission circuit in the second block 21, ...).

As per claim 9, since each of the fuses has two ends, it stores one bit of information, and the information can be anything which includes the information relevant to the semiconductor integrated circuit.

Art Unit: 2816

As per claim 10, this claim is rejected for the same reason noted in claim 4.

As per claim 11, this claim is rejected for the same reason noted in claim 5.

As per claim 12, this claim is rejected for the same reason noted in claim 7.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent No. 5,933,382 to Yi et al discloses a fuse circuit (Fig. 7) which includes a plurality of fuses 41A, ..., 49A and a plurality of transmission circuits 441A, ..., 449A.

US Patent No. 5,469,388 to Park discloses a fuse circuit (Fig. 7) which includes a plurality of fuses F1, ..., F8 and a plurality of transmission circuits T1, ..., T8.

US Patent No. 5,576,999 to Kim et al discloses a fuse circuit (Fig. 2) which includes a plurality of fuses F1, ..., F8 and a plurality of transmission circuits G1, ..., G8.

US Patent No. 6,026,037 to Hong discloses a fuse circuit (Fig. 3) which includes a plurality of fuses F21, ..., F28 and a plurality of transmission circuits (2011, 2012) and (2021, 2022).

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh Nguyen whose telephone number is 703-306-9179. The examiner can normally be reached on Monday - Thursday 7:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on 703-308-4876. The fax phone numbers for the

Application/Control Number: 09/879,637

Page 7

Art Unit: 2816

organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



Minh Nguyen
Examiner
Art Unit 2816

MN
November 1, 2002